

Remarks

Claims 1-26 are pending in the present application, wherein claims 1, 19, 21, 24 and 25 are independent claims. Claims 1, 13, 14, 19, 21, 24 and 25 have been amended by prior amendment. Claims 1-18, and 21-26 have been variously rejected under 35 USC §103(a). Claims 19 and 20 have been allowed. Applicant traverses these rejections and requests withdrawal thereof, as discussed below.

Rejections Under 35 USC §102

Claims 1, 5-7, 9, 10, 12-15, 21 and 23 have been rejected under 35 USC §103(a) as being unpatentable over Italian Patent No. IT431255 to Aldrovandi (“Aldrovandi”) in view of US Patent No. 1,949,658 to Remseth et al. (“Remseth”)

Aldrovandi teaches a *water heater* having a cylindrical arrangement. A tube 8 includes an exterior spiral shaped tube 8a that forms a cylinder that carries water to be heated. An electrical heating element 7 is disposed within and proximate to the inner portion of the spiral tube 8a – apparently to heat the water as it flows through the exterior spiral tube 8a. A straight portion of the tube 8 (or straight tube 9) is disposed along the central axis of the cylinder formed by the spiral tube 8a and appears to carry the heated water from the spiral shaped tube 8a to an output 13 of the heater. A gap appears to exist between the straight tube 9 and the heating element 7; within this gap is a material 5 – possibly an insulation material. (Aldrovandi, see FIGS. 1-4)

Remseth teaches an *air heating gun* having a pistol grip that includes “an air passage 10 extending from the butt of the handle to a small valve chamber 11 ...a centrally disposed nipple 12 communicates with valve passage 11 and has ...an annular seat for a plunger type valve 13. Valve 13 is suitably guided by slide bearings at the rear end of valve passage 11 and an elongated slide bearing 13a ...” The plunger valve 13 is connected by a slot and pin engagement with the swingable knife blade [trigger] 18.” – operable in a recess 15 having a guiding slot 15a. (Remseth, p. 1 lines 55-92, FIG. 1) When the trigger 18a is pulled, simultaneously the electrical circuit ...is closed and the valve plunger 13 is opened releasing the flow of fluid under pressure into the interior tube 26.”, where it is initially heated. From there, the air flows to sinuous air conducting tube 29 which runs lengthwise in the same direction as the interior tube 26. The air conducting

tube 29 is in apparent close proximity to heating element 21, where the air continues to be heated before exiting a nozzle 31. (Ramesth, p. 1 lines 55-92, FIG. 1)

The Office Action asserts that because Ramesth mentions that its' air heating gun could be used for heating and delivering fluids, gases or liquids, that it would have been obvious to combine the system of Ramesth with the water heater of Aldrovandi. In order to invalidate a patent under 35 U.S.C. section 103 using a combination of prior art, there must be some reason, suggestion, or motivation found in the prior art whereby a person of ordinary skill would make the combination. See *In re Oetiker*, 977 F.2d 1443, 1447, 24 U.S.P.Q.2d 1443, 1446 (Fed. Cir. 1992). However, the applicant contends that the mere mention of liquids in Ramesth does not, per se, give rise to a motivation to combine it with Aldrovandi. Many different systems deal with heating water, and many others deal with heating air. But a motivation arises out of a need to achieve a goal, there is no such need in Ramesth identified that would be satisfied by an application of Aldrovandi. Therefore, the Applicant contends that the combination of Ramesth and Aldrovandi is improper and this rejection should be withdrawn.

With respect to claim 1, the *isolated air transport path* is not taught by either of Ramesth or Aldrovandi, whether alone or in combination. First, only the outer spiral tube 8 of Aldrovandi is arranged to receive heat from its heating element 7. This heating element 7 is not shown as also being disposed proximate to the inner straight tube 9 of Aldrovandi, such that it would deliver heat to the water as it passes through straight tube 9. Rather, between heating element 7 and straight tube 9, there is a material 5. The Office Action likens material 5 to the *heater core* of the present invention, but there is no particular reference to Aldrovandi that suggests that it is a heater core. Even if, for the sake of arguendo, material 5 has some heat conductive properties that might transfer heat from heating element 7, this would still represent a different structure than that of claim 1, which does not require such an intermediate material. Rather, the present invention maximizes heat transfer efficiency by providing direct thermal communication between the air in the *isolated air transport path* and the *heater core*. Ramesth is not much better in this regard. Ramesth shows its heating elements proximate to air conducting tube 29, but there is an unidentified material apparently disposed between heating elements 21 and interior tube 26.

Additionally, Ramesth does not teach an *isolated air transport path*. Rather, Ramesth

shows in FIG. 1, for example, and its accompanying text, a plunger valve 13a controlled by a movable trigger 18a which is set in a recess 15. Pulling trigger 18a provides at least two opportunities for contamination of the air as it flows into interior chamber 26. First, pulling trigger 18 retracts plunger 13a and appears to allow external air in through recess 15. Second, the plunger valve 13a and trigger 18a are moving parts, and as such are subject to wear over time. This mechanical wear naturally takes the form of small particles from those moving components being worn off in the area of the air's entry into interior chamber 26. Therefore, Ramesth does not teach an isolated air transport path, and is, in fact, likely to introduce contaminants into the air from mechanical wear and tear.

For all of the above reasons, claim 1 is not made obvious by the references as cited and withdrawal of this rejection is respectfully requested. For these same reasons, claim 1's dependent claims 5-7, 9, 10, and 12-15 are also believed patentable over these references as cited and withdrawal of these rejections is respectfully requested.

Claim 21 is an independent claim that also includes an isolated air transport path. Accordingly, for the same reasons put forth with respect to claim 1, claim 21 and its dependent claim 23 are not made obvious by the references as cited and withdrawal of these rejections is respectfully requested.

The Office Action also rejects claims 2-4, 8, 11, 16-18, 22, and 24-26 under 35 USC §103(a) based on Ramseth and in view of various other references.

With respect to claims 2-4, 8, 11, and 16-18, which all depend from claim 1, for the reasons put forth above with respect to claim 1 and Ramseth, these dependent claims are also believed to be patentable and withdrawal of these rejections are respectfully requested.

With respect to claim 22, which depends from claim 21, for the reasons put forth above with respect to claim 21 and Ramseth, this dependent claim is also believed to be patentable and withdrawal of this rejection is respectfully requested.

Claims 24 and 25 are independent claims that also include an isolated air transport path. Accordingly, for the same reasons put forth with respect to claim 1, claims 24 and claim 25, and its dependent claim 26, are not made obvious by the references as cited and withdrawal of these rejections is respectfully requested.

The Commissioner is hereby authorized to charge any additional fees under 37 C.F.R. §1.16 and §1.17 that may be required, or credit any overpayment, to our Deposit Account No. 50-1133.

Respectfully submitted,

A handwritten signature in cursive script, appearing to read "David M. Mello", is written over a horizontal line.

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